CLAIMS

What we claim is:

1. A system for separating flowable composite media into its components, said system comprising:

pump means delivering a flowing stream of composite media, said composite media including at least a first component medium and a second component medium;

a separation tube through which the flowing stream of composite media is passed;

means for spinning the stream of flowable composite media about the axis of said separation tube at sufficient rotational speed that centrifugal force within the stream causes the components to separate into component radial layers;

extraction conduit means for selectively extracting one or more of the radial layers from said separation tube;

monitoring and automatic feed back means for measuring the component medium content of the composite media as the composite media enters and exits said separation tube and for adjusting the rotational speed of the media;

said monitoring and automatic feed back means including probe means extending into said media for gathering data concerning the content of said composite media, and an analyzer connected to said probe means for receiving and analyzing said data and for automatically controlling the rotational speed imparted to said composite media; and

at least one auxiliary filter having in fluid communication with said separation tube, said auxiliary filter having an inlet, a filtered outlet, and a non-filtered outlet.

2. A system for separating flowable composite media according to claim 1, wherein said at least one auxiliary filter comprises:

a generally cylindrical housing containing a generally cylindrical filter;

said cylindrical housing having an inlet disposed upstream of said filter, and a filtered outlet disposed downstream of said filter.

3. A system for separating flowable composite media according to claim 2, wherein said auxiliary filter includes self-cleaning means for cleaning said cylindrical filter.

4. A system for separating flowable composite media according to claim 3, wherein said self-cleaning means includes an elongate spray tube disposed within said cylindrical filter, said spray tube in fluid communication with a pressurized fluid source and having a plurality of apertures oriented so as to direct pressurized onto said cylindrical filter.

5. A system for separating flowable composite media according to claim 4, further including means for rotating said spray tube within said cylindrical filter.

6. A system for separating flowable composite media according to claim 5, further including:

monitoring and automatic feed back means for measuring the concentration of component medium content of the composite media on said cylindrical filter and for activating and controlling rotational speed of said spray tube and fluid communication between said spray tube and said pressurized fluid source;

said monitoring and automatic feed back means including probe means extending into said at least one auxiliary filter for gathering data concerning the concentration of medium on said cylindrical filter, and an analyzer connected to said probe means for receiving and analyzing said data and for automatically controlling the rotational speed of said spray tube and fluid communication between spray tube and said pressurized fluid source.